Abstract Submitted
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Relation of Lagragian structures and drifter dynamics in the Gulf of Mexico[1] CAROLINA MENDOZA, Universidad Politecnica de Madrid, ANA MARIA MANCHO, ICMAT, CSIC, STEPHEN WIGGINS, School of Mathematicss, University of Bristol | We use a Lagrangian descriptor (the so called function M) which measures the length of particle trajectories on the ocean surface over a given interval of time [1,2,3]. With this tool we identify the Lagrangian skeleton of the □ow and compare it on three datasets over the Gulf of Mexico during the year 2010. The satellite altimetry data used come from AVISO and simulations from HYCOM GOMl0.04 experiments 30.1 and 31.0. We contrast the Lagrangian structure and transport using the evolution of several surface drifters. We show that the agreement in relevant cases between Lagrangian structures and dynamics of drifters depends on the quality of the data on the studied area.

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[3] A.M. Mancho, S. Wiggins, J. Curbelo, C. Mendoza. Commun. Nonlinear. Sci. Numer. Simul. 18 (2013) 3530-3557.

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